1 Boulder

Boulder is not a safe place. Beneath the endless blue vault of Colorado's mile-high skies, the Flatirons stand as perilously perched reminders that this valley is never at rest. This is where the sea of grass of the North American interior abruptly collides with the Rocky Mountains. It is a landscape of accumulated catastrophes: seas that dried up, mountains erupting from the crust, ice grinding those mountains down, fires incinerating forests and prairies. This valley was always in some state of convulsion, punctuated by respites of stability. This aggregation required a sustained act of collective forgetting of the floods, fires, and churning earth that had erased every prior claim on the valley.

The Rocky Mountains themselves are geological adolescents, the product of a dying tectonic plate plunging beneath the North American continent, cracking the Earth's crust and forcing ancient seafloor skyward. These slabs of rock were raised higher than the modern Tibetan plateau, and a further vertical mile of sandstone and granite has since eroded into mere 14,000-foot peaks. Glaciers descended from the high country without quite reaching the valley floor, yet they released massive pulses of meltwater that carved canyons, cut creek beds, and washed gravel into the plains below. What looks like solid ground is an alluvial fan, a delta of everything the mountains could no longer hold. The city of Boulder sits on this debris.

Life in all its opportunism was attracted to the fresh water coursing through these rich sediments. Cottonwoods and willows threaded along Boulder Creek. Ponderosa pine and juniper claimed the drier ridges above. The ecological logic of this place has always been one of sharp transitions: mountain gives way to plain, wet to dry, cold to hot within the span of a single afternoon. Those transitions attracted everything that could exploit the gradients. The flora and fauna that established themselves here treated catastrophe as a condition to endure rather than an aberration: the ponderosa pine requires fire to open its cones, the cottonwood requires flood to disperse its seed, and the valley's ecological logic has always been one of erasure followed by rebirth.

The first humans to arrive in the region quickly understood this bargain. They likely came south through thawing corridors some thirteen thousand years ago, following megafaunal game. Clovis and Folsom cultures left bone fragments and projectile points in creek sediments as they moved between mountain and plain with the seasons. When the climate warmed and rendered age-old hunting and settling strategies obsolete, their successors adopted altered mobilities, developed specialized tools, and managed the landscape more deliberately through controlled burns that cleared meadows and concentrated game. By the time horses introduced by Spanish conquistadors spread north through the Plains in the seventeenth century, the Arapaho and Cheyenne had learned to ride them to follow the bison. Boulder Valley was a seasonal crossroads rather than a permanent home. What looked like the absence of permanent settlement was in fact a different theory of it: that a valley this volatile rewards those who move with its cycles rather than those who attempt to hold their position against them. The governance these peoples practiced for millennia was sophisticated enough to match the landscape's own terms.

Those terms did not survive contact with European settlers, who arrived in the Front Range in the middle of the nineteenth century. Their governance employed different assumptions about what the land was for and how it could be controlled. The tectonic convulsions that raised the Rockies also brought minerals containing gold, silver, and copper from deep within the Earth's crust. The immense value Europeans ascribed to these minerals brought abrupt and profound change to the landscape. Miners reached Boulder Valley in 1858, and what followed was swift: the displacement and slaughter of indigenous inhabitants, the privatization of land that indigenous peoples had treated as shared, and the imposition of infrastructures designed to extract whatever the mountains could yield. Forests were razed, streams dammed, ditches dug, railroads laid, and properties gridded along routes that treated the landscape as an obstacle to be engineered rather than a condition to be inhabited. Within a decade of the first mining camps, a city called "Boulder" had been incorporated in a territory called "Colorado."

What happened in Boulder over the next century was a transformation not only of the landscape but of the ideology governing it. The extractive violence of the mining era did not give way to something gentler so much as to something more capable of obscuring its coercions. A land-grant university arrived in 1876, charged with transforming Colorado's miners and farmers into good American citizens. In 1898, a coalition of Texas educators and Boulder civic boosters established the Colorado Chautauqua on a barren mesa at the foot of the Flatirons. It was the first parkland the city ever purchased, and it was part of a national movement that by its peak in the 1910s attracted forty million annual participants to programs of lectures, concerts, and coursework framed as moral self-improvement ?. The Ku Klux Klan held parades on Pearl Street in the 1920s. The federal government built weapons and aerospace laboratories

during the Cold War, filling the city with physicists and engineers who brought with them a faith in technical solutions whose afterlife would prove consequential. A blue line was drawn to stop the city from spreading into the mountains, and a greenbelt was established to stop it from spreading into the plains. Population growth was limited in the name of environmental protection. What the extractive frontier called taming, the progressive and technocratic frontier called managing.

That logic is the subject of this book: how a community abstracts its anxieties about disorder, contamination, and change into technical problems subject to "objective" numerical analysis and how those quantitative logics are translated into justifications for who has access to community, beauty, or safety. These mechanisms unfold in different ways in every community but they are unusually easy to see in Boulder. What makes Boulder instructive is how visibly these inheritances accumulate, and how thoroughly they are absorbed into a civic identity that has learned to present exclusion as environmental stewardship and implemented this stewardship through neutral arithmetic. Calculations about population growth, density, carrying capacity become determinations and judgments about who belong without ever requiring any justification beyond the numbers themselves.

The institutional foundations of that identity were laid earlier than most Boulder histories acknowledge, and more deliberately than the city's popular self-image would suggest. In the autumn of 1908, the Boulder City Improvement Association retained Olmsted Brothers, the Brookline, Massachusetts landscape architecture firm founded by the sons of the designer of Central Park, to survey the city and recommend a program of municipal improvements. The resulting document, issued in 1910 under the authorship of Frederick Law Olmsted Jr., is a genuinely reformist work in many respects: it proposes parks, defends wages against land speculators, and advocates for systematic management of Boulder Creek's dangerous floodplain (?). But it is also one of the earliest codifications of a vision of environmental preservation that specifies who belongs in the community it protects and what must be kept out to preserve the community's character.

Olmsted was not inventing this idea for Boulder. He formalized an identity that civic reformers had been cultivating for a decade, most visibly through the Colorado Chautauqua. The Chautauqua, which occupied land the city had purchased and leased back to a nonprofit association, was organized expressly for schoolteachers and their families. Its intended audience was educated, Protestant, upwardly mobile, and socially removed from working-class industrial labor. It charged admission, required transportation from the downtown railroad depot, and housed its summer residents in a cottage grid governed by design guidelines that enforced a "feeling of a large camp rather than a collection of individual properties" (?, 4). A perimeter fence and a ten-o'clock curfew policed its borders in the early years. It was, from its founding,

a bounded and selective community on public land, defining its character against the commercial entertainments it refused to host (?). The Chautauqua had already built, in physical and institutional form, the social logic the Olmsted report would extend into an administrative program for the rest of the city.

The most enduring element of that plumbing was a grammar of scarcity and urgency that Olmsted used to justify immediate public action. Mountain views, Olmsted argued, were a finite common resource subject to irreversible privatization. Envisioning public authority over the density and character of residential development by subordinating private property rights to a collectively defined vision of what the community should look like would become indistinguishable from the policy tools Boulder deployed in later decades to suppress new housing and restrict population growth in the name of environmental sustainability. The progressive intent and the exclusionary outcome ran through the same institutional plumbing. The subheading "The Cost of Delay" recurs through the report like a drumbeat, marking each moment where inaction is characterized not as a value-neutral choice but as responsible stewardship deferred at collective expense (?, 65). The resource Olmsted identified was aesthetic and spatial rather than ecological or cultural, but the argumentative structure is identical to the carrying-capacity arguments that would appear in Boulder's planning debates half a century later: a bounded endowment, a threat of irreversible loss, expert authority translating that threat into urgency, and immediate coercive intervention on behalf of the future presented as the only responsible response.

Neither the Olmsted report nor the Colorado Chautauqua makes explicit demographic arguments. Neither invokes the categories of race, national origin, or biological stock that permeated other Progressive Era reforms. Their logic is grounded in aesthetics, access, and the governance of taste: the question of what kinds of use, what kinds of resident, and what kinds of development belong in a community organized around the cultivation of natural scenery. This displacement of political argument into aesthetic and environmental categories is precisely what makes these documents important for the history that follows. They demonstrate that the components of a preservation imaginary can be assembled and made institutionally durable without recourse to the now-tawdry rationales of biological hierarchy or genetic inevitability. Those components are a bounded natural endowment treated as a finite resource, a selective community defined against undesirable uses, administrative instruments for exclusion, and expert authority naturalizing that exclusion as stewardship.

The institutional template Olmsted codified in 1910 waited half a century for its next formal elaboration. In 1958, an oft-recounted conversation took place between two CU Boulder faculty members: math professor Bob McKelvey declared that something had to be done about those foothills or they would be covered in houses. In 1959, a coalition of Boulder citizens alarmed by proposed real estate development on

the mountain backdrop organized under the People's League for Action Now (PLAN-Boulder) and successfully campaigned for what became known as the Blue Line Amendment: a provision prohibiting the city from extending water service above a fixed elevation contour, thereby making hillside development administratively impossible without annexation and infrastructure investment the city could simply refuse to provide (?). The views Olmsted had designated Boulder's "priceless possession" were protected not by scenic easement or preservation ordinance but by the bureaucratic logic of access to municipal water.

The other half of that 1958 conversation with McKelvey was Albert Bartlett. Bartlett was a nuclear physicist who had joined the University of Colorado faculty in 1950 after completing his doctorate at Harvard and spending the final years of the Second World War measuring plutonium isotopes for the Manhattan Project at Los Alamos. To use the language of a later era, Bartlett was a community organizer: a scientist who understood that technical authority could be translated into civic leverage. Bartlett would spend the next half century translating his expertise with the exponential mathematics of radioactivity as persuasive template about the consequences of growth.

The Blue Line was an early demonstration of this translation. It took the Olmsted report's scarcity frame, a finite natural endowment subject to irreversible privatization, and grounded it not in aesthetic judgment but in arithmetic: above a certain elevation, the physics of water pressure and the economics of infrastructure could be mustered to defeat development without confronting it directly. The city needed only to define a line on a map to achieve its policy goal. What Olmsted had argued through the cultivated authority of the landscape architect, McKelvey and Bartlett could argue through the harder authority of mathematics and physics. Bartlett's lecture and arguments at the end of his career and the political uses to which his arithmetic would eventually be put are the subject of the chapters that follow. But the origins of Bartlett's conviction that the right number, placed in the right instrument could make exclusion feel like stewardship lay here in the same foothills Olmsted had designated Boulder's priceless possession.

Bartlett and PLAN-Boulder went on to anchor a cascade of instruments through the mid-century, each of which extended the original Olmsted grammar of bounded endowment, selective access, and expert stewardship into new administrative domains. The open space program, launched in 1967, authorized the city to purchase and permanently retire land on its mountain and plains perimeter, removing it from the development market and protecting the views that defined Boulder's civic identity. The Danish Plan capped annual residential building permits at 450 units, a figure derived from calculations about infrastructure capacity and environmental carrying capacity that arrived at the city council bearing the authority of technical necessity rather than the vulnerability of political choice ?. The Boulder Valley Comprehensive Plan of 1977

formalized a population ceiling for the planning area, translating an intuition about the city's proper scale into an administrative target. Height limitations, floor-to-area ratios, service boundaries, and growth allocation systems accumulated around these anchor instruments across the 1970s and 1980s, each adding one more quantitative threshold to a planning architecture that was, by 1985, among the most elaborate in any American city of comparable size.

None of Boulder's Blue Line, open space program, or growth management instruments required the invention of new political logic. Each extended a template already in place for decades, further rationalized through the emerging vocabularies of environmental protection and technocratic governance. Flood control levees, fire risk maps, traffic models, demographic forecasts, zoning ordinances, and permitting regulations all drew on a shared faith in numbers as instruments of order ?. Theodore Porter's account of how quantification functions as a "technology of trust" describes the mechanism at work in Boulder's governance: the impersonal authority of calculation substituted for the messy, contested, interest-laden process of democratic negotiation, making exclusionary outcomes appear as objective responses to ecological constraint (?). Numbers became the infrastructure of safety for a city organized around the preservation of scenery and the cultivation of "cultivated" residents. How those same tools of quantitative rationalization became embedded within ideologies committed to exclusion and dominance motivates the remainder of the book. While Boulder is not the origin of those ideologies, it became one of their most legible proving grounds: a nominally progressive community where the slide from conservation into coercion was accomplished so gradually, and with such apparent good faith, that it is difficult to see when the bargain changed.

Boulder's planners and civic advocates experienced this apparatus as environmental protection. They were not wrong to do so. The Blue line kept houses from dotting Boulder's dramatic foothills. The open space system has preserved farms and grassland from becoming suburban sprawl. The environmental commitments behind them were, in most cases, genuine. What the apparatus also produced, without announcing or intending it, was a city whose demographics reproduced the structural pre-requisites of mid-century conservation: Boulder became white, educated, and prosperous at rates that exceeded what university presence alone would predict. In 2020, the city was 83 percent non-Hispanic white in a state that was 66 percent so, and in a nation approaching a demographic composition where no single racial group constitutes a majority ?. Its housing costs rose at multiples of the regional average. Working families, recent immigrants, and households without generational wealth were priced out of the labor market the city's economy required. Car-centered sprawl exploded in the exurbs of the "L"-towns surrounding Boulder that lacked the same values of conservation. The infrastructure of environmental safety was simultaneously an infrastructure of demo-

graphic selection, and the two functions ran through the same instruments, the same calculations, and the same invocation of technical necessity.

How did that happen? The question this book pursues is not why Boulder produced exclusion: exclusion is the ordinary product of American land-use governance, and the longer history of zoning, redlining, and infrastructure (dis)investment that structures most American metropolitan geographies. The question is more specific: how did the quantitative tools of environmental stewardship come to share the grammar of far-right nativist politics? How did carrying capacity calculations, exponential growth curves, and population impact assessments travel from progressive activists in Boulder's city council chambers to the pseudo-scientific journals of white nationalists? What about Bartlett's exponential lectures caused him to spend his retirement advocating for draconian immigration restrictions alongside white supremacists? What does it mean that the quantitative tools Bartlett used to justify protecting Boulder's open spaces from development could be reused to justify protecting the United States's European heritage from replacement?

The answer lies not in Boulder's peculiarities but in a mechanism that operates wherever quantitative authority meets demographic anxiety: the recruitment of numerical instruments, originally developed for ecological or scientific purposes, to perform political work that their form disguises as technical necessity. This book traces that relationship across a hundred years of American demographic and environmental governance. It follows how certain kinds of numbers, simple, visual, alarming, and portable, became infrastructure for reactionary politics. It shows how exponential arithmetic became environmental common sense, how immigration impact statements became policy expertise, how demographic projections became racial countdowns, and how fertility rates became investment metrics. It identifies the actors who built these instruments, the organizations that circulated them, the metaphors that made them persuasive, and the political projects they served. And it asks whether measurement can be redirected: whether the same quantitative tools that narrowed the circle of concern can be rebuilt to widen it.

Quantitative chauvinism

Consider what Bartlett's lecture does. He asks the audience to imagine a bottle, a single bacterium, and a doubling time of one minute. The bacterium divides. One becomes two, two become four, four become eight. The bottle fills at noon. "At what time was the bottle half full?" Bartlett asks. The audience hesitates. "Eleven fifty-nine," he says. "One minute before noon." He lets the vertigo land. "At five minutes before noon, the bottle was only three percent full. The bacteria that lived through most of the hour experienced nothing but abundance. The catastrophe arrived in the final minutes, and by the time the colony recognized it, the doubling time left no room

for response. Bartlett drew the parallel explicitly: human population growth follows the same exponential curve, and humanity, like the bacteria, will not recognize the catastrophe until the bottle is nearly full Bartlett (1976).

The thought experiment is pedagogically brilliant even if its implications are catastrophic. It compresses a complex demographic process into a single alarming metric and converts a conditional projection into an unconditional destiny: the bottle will fill. The tutorial register of a patient physicist guiding the audience through simple arithmetic constructs an authority that makes the compression invisible and the audience feels that they have a new intuition about mathematics when what they have understood is the moral: exponential growth in a finite system is a death sentence, and by the time you notice the problem, it is too late to act.

But what Bartlett's thought experiment elides reveals where politics of what and how to count. The exponential model assumes a constant growth rate with no feedback, no adaptation, no change in behavior as conditions shift. It treats the bottle as a closed system with fixed carrying capacity, admitting no possibility that the organisms might modify their environment, reduce their growth rate in response to density signals, or redistribute their population across a larger landscape. It suppresses the demographic transition, the well-documented historical pattern in which fertility rates decline as women gain access to education, economic opportunity, and reproductive autonomy, a pattern that was already well underway globally by the time Bartlett developed his lecture

The lecture suppresses structural causes entirely. The question of why a population grows is answered by the mathematics of exponential growth rather than by the social, economic, and political arrangements that determine who reproduces, where, under what conditions, and with what consequences. Consumption patterns, production relations, resource distribution, colonial legacies, and governance choices do not enter the model. The model operates on a single variable, the growth rate, and that variable absorbs the explanatory work that an entire political economy would otherwise perform. What remains is a countdown. And the thought experiment elides the most fundamental suppression of all: people are not bacteria. Human populations respond to information, make choices, build institutions, innovate, and alter their behavior in response to the very pressures that exponential arithmetic treats as constants.

What makes this suppression politically consequential rather than merely pedagogically convenient is the institutional mechanism through which it operates. Theodore Porter identified that mechanism in his study of quantification in democratic governance. Numerical objectivity, Porter argued, did not spread because it reliably produced accurate descriptions of the world. It spread because it supplied a politically useful pose of impersonality. In contexts of democratic contestation, where interested parties disagree about values and priorities, numbers let decision-makers present choices as

outcomes of method rather than expressions of interest (?). The physicist at the lectern is not arguing for a political position. He is teaching the audience to see what the mathematics reveals. The authority of the number replaces the authority of the argument, and contestation becomes not disagreement but innumeracy.

Alain Desrosières identified why these substitutions become invisible over time. Statistical categories, he showed, are political settlements that become naturalized through institutional routinization. The equivalences that enable counting, the decisions about what constitutes a household, a race, a cost, a burden, a "carrying capacity," appear as features of a pre-existing world rather than as products of contested administrative choices (Desrosières, 1998). Once institutionalized, the categories produce the very reality they claim to describe. The census does not simply count racial groups; it produces them as administrative objects with specific fiscal, electoral, and governance properties. The fiscal impact statement does not simply measure the cost of immigration; it constructs "the immigrant" as a fiscal category whose value can be calculated, compared, and optimized. Geoffrey Bowker and Susan Leigh Star extended this insight into infrastructure: classification schemes produce social reality by determining what can be counted, compared, and acted upon, while training administrators to treat classification as routine procedure rather than as political choice (?). Each deploys numerical form to present a political arrangement as a technical necessity, something discovered in the data rather than constructed by the instrument. The arrangement feels natural because the numbers feel objective. The numbers feel objective because the institutional infrastructure that produces them has become invisible.

Quantitative chauvinism draws on Hannah Arendt's account of chauvinism as a political form that organizes collective identity through hierarchy and exclusion, extending it to name a specifically epistemic operation: the use of quantitative authority to close down the range of thinkable political responses (Arendt, 1945). For Arendt, chauvinism's defining move was not the assertion of superiority as a belief but its conversion into the self-evident premise of political judgment, the background assumption against which specific policy choices appear as simple applications of what everyone already knows, or "common sense." Quantitative chauvinism performs an equivalent conversion at the epistemic level: numerical outputs from simplified models become the background assumption against which coercive governance appears as the reluctant but necessary application of what arithmetic demands. The conversion is accomplished, as Theodore Porter has documented, through the politically useful pose of impersonality that quantification supplies (?).

The term also draws on the history of demography's entanglement with supremacist politics, a history that the discipline has spent seven decades attempting to manage and that has not been fully resolved. Edmund Ramsden's account of how genetics and demography developed shared institutional infrastructure with eugenics in the

early twentieth century documents the mechanism through which supremacist ranking acquired scientific authority in the first place: through the gradual normalization of population categories that sorted human variation into heritable types amenable to administrative management (Ramsden, 2009, 2003). Alex Stern's history of eugenic governance in California traces how that infrastructure operated at the state level, embedding sterilization programs, immigration restriction, and racial classification into public health and welfare institutions that outlasted the formal repudiation of eugenics ?. Wendy Kline documents a parallel pathway through gender and sexuality, showing how eugenic logics organized reproductive governance by defining which bodies were fit to reproduce and which were not, decisions that fell disproportionately on women of color and women in poverty ?. Ayah Nuriddin extends this critical genealogy by tracing how eugenic categories migrated into public health research after the discipline's official break with eugenics, demonstrating that the institutional channels Ramsden identified did not close so much as rebrand ?.

The entanglement was never purely domestic. Matthew Connelly's global history of the population control movement shows how mid-century demographic science was recruited by philanthropic foundations, development agencies, and Cold War state actors into a coercive apparatus that targeted the fertility of women in the Global South as a security threat requiring administrative intervention (Connelly, 2010). Emily Klancher Merchant reconstructs the prior step: how "the population bomb" was assembled as a scientific and policy object through the coordinated work of demographers, ecologists, and foundation program officers who translated uncertain demographic projections into a crisis narrative demanding immediate institutional response (Merchant, 2021). Thomas Robertson documents how that crisis narrative crossed into American environmentalism, showing that the postwar environmental movement absorbed Malthusian population anxiety not as an incidental influence but as a constitutive feature of its political and cultural formation (Robertson, 2012). The instruments traced in this book, the exponential curve, the fiscal impact calculation, the demographic projection, inherited the authority of that apparatus even as the apparatus itself was contested and partially dismantled.

Feminist scholars have been the sharpest critics of the political work that population knowledge performs. Betsy Hartmann's analysis of population control as a global governance project demonstrated that the movement's stated concern for environmental sustainability and women's welfare consistently subordinated women's reproductive autonomy to demographic targets set by institutions that excluded the women those targets governed (Hartmann, 2016). Jade Sasser's study of climate and development organizations shows that this subordination persists in contemporary form: population-environment advocacy recruits young women as ambassadors for fertility reduction while framing their bodies as sites of climate intervention, reproducing the coercive

logic of mid-century populationism under the sign of sustainability ?. Rebecca Sear's analysis of demography's cyclical relationship with eugenic thinking confirms that the discipline's mid-century rejection of explicit eugenics did not dissolve the institutional connections through which eugenic rankings continued to circulate under the cover of population science (Sear, 2021). Quantitative chauvinism names the persistence of this architecture: not the beliefs of individual demographers, but the institutional infrastructure through which numerical authority converts political preferences into technical findings, an infrastructure whose eugenic origins remain legible in its classificatory habits even when its practitioners have long since disavowed the ideology that built it.

This book calls that mechanism *quantitative chauvinism*. The term names more than a generic enthusiasm for numbers or a tendency to let spreadsheets substitute for deliberation. Quantitative chauvinism is a political operation: the deployment of numerical instruments to foreclose political deliberation by converting contested claims into apparent technical necessities. What Bartlett's lecture, the immigration impact statement, and the Census Bureau's majority-minority projection share is a common conversion sequence. Each begins with a political preference, that growth must stop, that immigrants cost too much, that demographic change threatens national identity. Each feeds that preference through an instrument that compresses complex social processes into a single metric, a doubling time, a per-household fiscal burden, a crossover date. The conversion works because the instruments are portable. Bartlett's exponential curve was developed for a physics classroom, but once it was compressed to a thought experiment, it traveled: into Sierra Club newsletters, into congressional testimony, into nativist pamphlets distributed at county fairs. Preferences disappear into the arithmetic as quantitative instruments acquire political force by shedding the institutional contexts and leaving behind the caveats, the assumptions, and the methodological choices that would have made the finding contestable. Quantitative chauvinism converts *preferences* about who belongs into *evidence* that demands action, and the conversion succeeds because the instruments that perform it are engineered, whether by design or by institutional selection, for travel. This unfolds with three common patterns.

The first is the *will to simplify*: the compression of complex demographic and ecological processes into a single governing metric that then inherits the explanatory authority of the system it replaced. Bartlett's doubling-time calculation reduces the interacting dynamics of fertility, mortality, migration, technology, consumption, distribution, and political economy into a single alarming number. Once reduced, the metric appears as a description of a natural condition rather than as a summary of the political choices that produced it. The causal complexity that would complicate the metric, the structural variables that would reveal it as a partial and interested description, disappears into the arithmetic. What remains is a countdown. Chapter 2 traces the will to simplify through

the Free Fall era, where exponential arithmetic converted population dynamics into a moral emergency.

The second is the *rule of expertise*: the insulation of quantified claims from democratic scrutiny through credentialed authority. When a think tank publishes a fiscal impact statement concluding that immigrants cost a state government a specific dollar amount per household, the finding arrives at the congressional hearing wrapped in the authority of expertise. The methodological choices, the aggregation decisions, the suppressed variables, the political assumptions embedded in the cost categories are invisible to the audience, which encounters only the number and the credential. The impact statement converts a political claim, that certain people cost too much, into an administrative finding, that the data show a net fiscal burden. Michael Power's study of audit culture identified this mechanism at the institutional level: audit regimes treat documentation as a proxy for accountability, insulating quantified claims from substantive scrutiny by substituting procedural compliance for democratic evaluation (Power, 1997). Chapter 3 traces the rule of expertise through the Quarantine era, where immigration restriction survived delegitimation by embedding itself in the aesthetic of policy expertise.

The third is the *politics of inevitability*: the conversion of conditional projections into mandates that foreclose political choice. In 2008, the U.S. Census Bureau released a projection showing that non-Hispanic whites would become a minority of the American population by 2042. The projection was conditional, built on assumptions about stable racial categories, consistent self-identification patterns, and unchanged classification systems over a fifty-year horizon. Every one of those assumptions was empirically questionable. But the crossover chart, with its converging lines and marked intersection point, created the visual grammar of a countdown: a destination rather than a scenario, a destiny rather than a set of assumptions. The conditionality was invisible. The countdown was not. Chapter 4 traces the politics of inevitability through the Swarm era, where decomposed demographic data became the raw material for the "great replacement" narrative.

These three orientations are not sequential stages in a historical progression but operate concurrently and reinforce one another. Simplification makes expertise possible, because the metric must be simple enough for non-specialists to cite while remaining complex enough to require credentialed interpretation. Expertise makes inevitability possible, because the authority of the credential insulates the projection from democratic challenge. Inevitability feeds back into simplification, because the foreclosed future justifies further compression of complex realities into governable metrics. The reinforcement loop is what gives quantitative chauvinism its political durability: each orientation protects the others from contestation.

The argument of this book is not that numbers are the problem. Rather, certain genres of quantification, optimized for portability and moral urgency, act as vectors for

extremist politics by converting uncertain futures into mandates for coercion. Measurement can narrow the circle of concern, constructing some populations as burdens, some futures as threats, and some coercions as necessities. But measurement can also widen it, revealing who bears environmental costs, who is invisible to governance, who is excluded from public goods, and whose risks are externalized by the institutional arrangements that protect everyone else. The closing chapters develop this constructive horizon under the name *quantitative egalitarianism*: the commitment to making assumptions visible rather than burying them, making uncertainty legible rather than suppressing it, making categories contestable rather than naturalizing them, and making governance accountable rather than insulating it behind the authority of the credential. The full development of that commitment comes later. For now, it is enough to hold the wager in view: the instruments can be redirected. The question is whether we will redirect them before the trajectory documented in this book reaches its logical conclusion.

Eco-fascist Imaginaries

While quantitative chauvinism provides the epistemic infrastructure of data, methods, and interpretations, the political projects it enables are the subject of this book's second analytical register. The political projects that recruit quantitative authority are *eco-fascist imaginaries*: organized visions of environmental futures that naturalize hierarchy and exclusion as ecological necessity, mobilize that hierarchy through institutional and cultural infrastructure, and deploy governance apparatus to maintain it. Specifying what that concept means, and why "imaginary" is the right term for what it names, requires drawing on three distinct scholarly traditions that have rarely been brought into direct conversation: fascism theory, the sociology of sociotechnical imaginaries, and the study of anticipatory governance.

Ecofascism is not a loose synonym for environmental pessimism, authoritarian environmental policy, or reactionary conservationism. It names a specific political formation defined by three constitutive features, each documented across the historical cases this book examines. First, ecological crisis is made the ground for palingenetic purification: the collective body is not merely in difficulty but is dying, and its restoration requires identifying and expelling the contaminants responsible for its degeneration. Second, that contamination is given demographic content: the crisis is explained by the presence of the wrong bodies, the excess reproduction of undesirable populations, or the insufficiency of reproduction among desirable ones. Third, coercive sorting of populations is authorized as stewardship rather than violence: the management, restriction, and elimination of targeted groups appears not as political choice but as ecological necessity, as what the facts demand (Griffin, 2018; Stanley, 2020; Thomas and Gosink, 2021).

Roger Griffin's analysis of fascism as palingenetic ultranationalism supplies the definitional anchor for the first of these features. Palingenesis, the myth of national rebirth from a condition of decadence and decline, distinguishes fascism from adjacent political forms that may impose coercive or authoritarian governance without centering the narrative of civilizational death and renewal. Ecofascism is the variant in which ecological crisis supplies the raw material for that palingenetic narrative: the nation is not merely in difficulty but is violating its natural constitution, and restoration requires returning to a natural order that demography has obscured (Griffin, 2018). The distinction matters analytically because it separates ecofascism from eco-authoritarianism, which can restrict environmental decision-making and mandate conservation without invoking the death-and-rebirth structure; from right-wing environmentalism, which encompasses a broader range of conservationist and ruralist traditions, some of which remain non-fascist in the technical sense; and from eco-populism, which claims democratic representation for environmental grievance without necessarily resolving it through purification and exclusion (Conversi, 2024; **?**). Ecofascism sits at the intersection where these currents fuse with enemy-making, emergency governance, and the coercive or violent sorting of populations justified as ecological stewardship.

Hannah Arendt's analysis of imperialism and race-thinking provides the second constitutive feature and its historical mechanism. Arendt showed how techniques of classification, dispossession, and the treatment of populations as material for administration, developed at the edges of European empire, re-enter domestic politics under conditions of crisis. The camp in Arendt's account is not only a location; it is a political technology for managing populations rendered "superfluous" by a political order that no longer recognizes their right to have rights (Arendt, 1945). Ecofascist imaginaries resonate with this technology when climate planning normalizes detention, selective rescue, and triage as administrative responses to scarcity. Simpson and Cheever's recent reconceptualization of ecofascism's roots in the racial capitalocene adds a third genealogical layer: ecofascism is not an episodic aberration but a recurrent afterlife of colonial and racial-capitalist governance, which reactivates under conditions of crisis by recruiting the language of ecological necessity to manage the surplus populations that racial capitalism has produced (Simpson and Cheever, 2025). The history that this book traces, from Progressive Era eugenics through Cold War population control through contemporary replacement narratives and pronatalist longtermism, is partly a history of that reactivation across successive institutional forms.

Contemporary scholarship on ecofascism has debated whether the term travels coherently across historical periods and political formations (Conversi, 2024; Hughes et al., 2022). Kristy Campion's integrated definition resolves the most significant tension in that debate: ecofascism is identifiable not by surface features like the invocation

of nature or the concern with ecological limits, but by the structural combination of ecological crisis narrative with a politics of internal purification organized around demographic hierarchy (?). This structural definition allows recognition across variation in the specific threat objects constructed, the specific populations targeted, and the specific institutional settings in which the imaginary operates, while remaining analytically precise enough to distinguish ecofascism from adjacent forms that share some but not all of its constitutive features. It is this structural definition that this book applies across five eras.

The concept of "imaginary" rather than "ideology" or "discourse" captures a specific property of the political formations this book analyzes: the way in which visions of desired or threatened futures become institutionally durable through their embedding in technical systems, expert practices, and governance infrastructures. Charles Taylor distinguished social imaginaries from explicit theories on precisely this ground: social imaginaries are the deeper, often unarticulated understandings that enable ordinary people to make sense of their social existence, recognize its norms, and sustain the practices that collective life requires, without being able to articulate a systematic account of what they are doing (Taylor, 2002). An imaginary is not a belief one holds; it is the background that makes certain beliefs and practices intelligible, natural, and self-evidently correct.

Sheila Jasanoff and colleagues in science and technology studies extended this concept to foreground the entanglement of imaginaries with technical systems, scientific authority, and institutional practice. Sociotechnical imaginaries are collectively held, institutionally stabilized visions of desirable or threatening futures that are simultaneously normative, specifying what counts as a good future and what counts as a threat to it, and performative, becoming durable through laws, infrastructures, and routine administrative practices that enact those futures rather than merely describing them (Jasanoff and Kim, 2015; Jasanoff, 2015).

Two features make this framework analytically indispensable for understanding how eco-fascist formations persist across delegitimation, institutional disruption, and political change. The first is that imaginaries are simultaneously normative and material: they specify desirable outcomes and also specify the instruments treated as legitimate for reaching them. When an eco-fascist imaginary defines ecological crisis as a problem of demographic pressure, it simultaneously authorizes specific instruments of intervention, population controls, border enforcement, and demographic triage, as the legitimate response to a discovered natural constraint. The second is that imaginaries are self-stabilizing: they become durable through the institutional routines, professional training, and technical infrastructures that enact them, so that individual actors who have never consciously endorsed the imaginary's political premises nonetheless reproduce it through their administrative practice. As Hendriks, Karhunmaa, and Delvenne's recent

review of the sociotechnical imaginaries literature documents, this self-stabilizing quality is what allows imaginaries to operate within and through mainstream governance institutions without requiring explicit ideological commitment from the practitioners who enact them (Hendriks et al., 2025).

Eco-fascist imaginaries acquire their institutional durability from precisely this mechanism. They do not operate primarily through the persuasion of conscious adherents; they operate through the embedding of their threat constructions, demographic rankings, and exclusionary instruments in technical systems, policy genres, and administrative routines that appear to be doing something else entirely: measuring ecological limits, auditing fiscal impacts, projecting demographic futures, or planning for climate adaptation. The imaginary is invisible precisely because it has been converted into infrastructure. When this book shows Bartlett's exponential curve naturalizing coercive population governance, the Tanton network's impact statements hierarchizing immigrant populations by fiscal burden, or the Census Bureau's majority-minority projection maps arming replacement narratives with federal authority, it is showing an imaginary at work in its infrastructure, not an ideology being propagated through argument.

Eco-fascist imaginaries' orientation toward the future is their defining structural property and the source of their most consequential political effects. The threat object is never simply present, here and demanding response; it is always primarily projected, a trajectory whose current rate will produce intolerable outcomes if governance does not intervene before the window closes. The moral warrant for coercive action derives from this futurity: harm prevention is authorized in advance of the harm, against populations who are targeted for their projected trajectories rather than for their present conduct. The politics of inevitability, the third element of quantitative chauvinism's triptych captures this temporal logic that converts an imaginary's threat construction into coercive authority over the present.

The sociology of anticipatory governance documents this temporal mechanism across a range of institutional domains. Berten and Kranke's account of anticipatory global governance shows how international organizations increasingly govern through practices that imagine and establish "present futures": projections, risk indices, scenarios, and early-warning systems that authorize action against threats that have not yet materialized by treating the forecast future as a binding constraint on present choice (Berten and Kranke, 2022). Muiderman and colleagues identify four approaches to anticipatory climate governance, each resting on a different conception of the future, but all sharing the core logic that governance should be organized around plausible trajectories rather than present conditions (Muiderman et al., 2020). Lazaro and Rizzi extend this analysis to the predictive analytics through which artificial intelligence increasingly claims authority over governance decisions, showing how the sociotechnical imagi-

nary of computational foresight insulates algorithmic projections from the democratic scrutiny that explicit political argument would attract (Lazaro and Rizzi, 2023). Each of these accounts identifies a mechanism through which ecological crisis and demographic anxiety are converted into governance authority in the present by reference to futures that the models have already decided. Eco-fascist imaginaries exploit that mechanism most aggressively: if the projection shows demographic replacement, the collapse of carrying capacity, or the exhaustion of cultural or civilizational resources, then the coercive interventions required to prevent those futures appear not as political choices but as responsible preparation for an emergency that the arithmetic has already declared.

The populationist tradition has exploited anticipatory governance's temporal authority since the publication of *The Population Bomb* in 1968. Miranda Iossifidis's analysis of the contemporary "populationist climate futures industry" documents how population-focused environmental organizations deploy the speculative technologies of scenario-building, interactive data visualization, and predictive infographic to make neo-Malthusian interventions appear as reliable forecasts of an impending apocalypse whose prevention requires acting now on the fertility and mobility of Global South women (?). The futures these scenarios fabricate are simultaneously scientific, because they cite United Nations projections and employ the aesthetic conventions of legitimate climate modeling, and coercive, because the only action they authorize is reducing the reproduction of the populations they identify as the upstream drivers of ecological crisis. Susanne Schultz identifies a "neo-Malthusian reflex" running across technocratic, right-wing, and some feminist climate discourse: when ecological crisis is in view, the claim that population pressure is its primary driver returns with remarkable regularity across political registers, each time reaching for the same anticipatory authority (?). What the reflex produces is not simply a mistaken claim about causation but a temporal structure in which coercive governance is pre-authorized by the projection, and deliberation is positioned as dangerous delay.

The longtermist turn in Silicon Valley ideology represents the most recent and institutionally consequential form of this futurity anxiety. Timnit Gebru and Émile Torres have documented how the TESCREAL bundle of ideologies, fusing transhumanism, effective altruism, singularitarianism, cosmism, rationalism, extropianism, and longtermism, treats the long-run composition of humanity as a variable to be optimized, and demographic governance as a problem of portfolio allocation across civilizational time horizons (Gebru and Torres, 2024). Longtermism's claim that present choices should be evaluated primarily by their effects on the vast numbers of humans who will (or might) exist in the future licenses a form of demographic authority that is both more expansive and more opaque than the population-control movements this book traces in its historical chapters. It is more expansive because its time horizon is effectively

unlimited, authorizing present coercion by reference to populations that do not yet exist and futures whose probability is entirely a matter of contested modeling assumptions. It is more opaque because the same computational infrastructure that generates longtermist claims also generates the claims' apparent authority, so that the projection and the justification for acting on it are produced by the same apparatus without any external check.

Pronatalist nationalism, the claim that the fertility of preferred populations must be stimulated to prevent civilizational decline, represents longtermism's most immediately politically consequential deployment. Leslie King's comparative analysis of pronatalist policy across France, Romania, Singapore, and Israel demonstrates that pronatalism is not simply the mirror image of anti-natalism but structurally equivalent to it: both treat human reproduction as a governance variable rather than as a domain of bodily autonomy, and both recruit demographic anxiety about future population composition to authorize coercive intervention in present reproductive choices (?). Zero population growth and pronatalism are, in this structural sense, the same operation run in different directions toward the same end: the management of which people exist in the future, at whose expense, and by whose authority.

What links population panic, replacement anxiety, and longtermist optimization across the five eras this book traces is not a shared ideology but a shared temporal structure: the projection of an intolerable demographic future whose prevention authorizes coercive intervention in the present, delivered with the authority of quantitative form. Diana Ojeda, Jade Sasser, and Elizabeth Lunstrum identify this structure as "Malthus's specter": a recurring discursive formation in which the anticipatory framing of demographic futures creates the moral space for governance interventions whose immediate targets are the bodies and mobility of poor and racialized people, while the structural conditions producing ecological crisis, extraction, unequal consumption, colonial land tenure, and racial-capitalist dispossession, are systematically displaced from the causal frame (?).

The specter returns because the epistemic apparatus that sustains it — quantitative chauvinism's simplified models, deference to authority, and politics of inevitability — is available to any political formation that needs to present a preference about whose futures matter as a constraint discovered in the data. This book traces the common trajectories of how specters and other anxieties has been reconstituted, after each successive delegitimation, through new quantitative instruments and new institutional hosts. Across those eras, ecofascist imaginaries become analytically recognizable through four elements that function as this book's diagnostic vocabulary.

Threat objects are the entities that ecofascist imaginaries construct as sources of ecological and social danger. In population discourse, threat objects have included overpopulation as an abstract condition, immigrants as vectors of demographic pressure,

racial minorities as agents of "replacement," and fertility decline as civilizational death. What unifies these constructions is the scarcity narrative: each threat object is framed as a pressure on finite resources, a weight on a precarious slope, or an inflow overwhelming absorptive capacity. The threat object is always a demographic category, never a structural condition. Consumption patterns, production relations, colonial legacies, and governance failures do not appear as threat objects because they cannot be reduced to a headcount, cannot be visualized as a steepening curve, and cannot be governed through the coercive instruments that demographic targeting authorizes. In Bartlett's pre-1995 writing, the threat object is the exponential growth curve itself (Bartlett, 1976). By 1995, immigration emerged as a specified threat object, named as one of "two major reasons" for continued U.S. population growth, a specification that transformed an abstract mathematical concern into a governable and racially legible population (Bartlett and Lytwak, 1995a).

Moral warrants are the justificatory frameworks that make exclusionary responses appear virtuous rather than cruel. They convert coercive governance into ethical obligation. In population discourse, moral warrants have included planetary triage, stewardship-through-exclusion, fiscal responsibility, and civilizational stewardship. Bartlett deployed moral warrants through the freight-train metaphor: stopping a freight train inevitably produces damage, but the alternative is catastrophic overrun (Bartlett and Lytwak, 1995a). The collateral harm becomes morally necessary because the physics demands it. This framing positions exclusionary governance not as a choice about whose lives matter but as the reluctant response of realistic stewards to a physical constraint.

Action repertoires are the policy instruments and governance practices that ecofascist imaginaries authorize as appropriate responses to their threat objects. In population discourse, action repertoires have included coercive fertility controls, exclusionary border regimes, family separation, detention and deportation, selective aid conditionality, managed abandonment, and mass violence presented as defensive action. The post-Cairo moment this book traces redirected action repertoires from reproductive intervention toward border enforcement, relocating coercion onto already racialized infrastructures while preserving the underlying logic: some bodies must be prevented from being present for the sake of aggregate stability.

Aesthetic signatures are the visual, temporal, and affective markers that make ecofascist imaginaries recognizable across contexts. Countdown charts compress time into urgency. Threshold rhetoric marks points of no return. Emergency metaphors frame political outcomes as natural disasters. The tutorial register trains the audience's interpretive habits so that deliberation appears as dangerous delay. Bartlett's pedagogy is saturated with aesthetic signatures: the steepening curve, the doubling-time countdown, the bottle filling at noon, the three percent open space that feels like abundance

but is five minutes from catastrophe (Bartlett, 1976). These signatures do not merely describe a crisis. They produce the affective conditions under which coercive governance appears as the only realistic response to what arithmetic has already decided.

Together, these four elements provide the diagnostic vocabulary this book uses to analyze each era's governing metaphor. They form a compact template, recognizable and portable, capable of traveling from classrooms to congressional hearings to chan-board memes while maintaining enough flexibility to recruit new threat objects and authorize new action repertoires as political contexts shift. Each era chapter shows the four elements operating in a different configuration: the threat object shifts from overpopulation to the immigrant to the racial minority to the childless society, and the aesthetic signature shifts from the exponential curve to the fiscal impact table to the crossover chart to the inverting population pyramid. But the underlying structure persists: ecological or demographic crisis, fused with demographic hierarchy, producing exclusionary governance that presents itself as stewardship.

The relationship between quantitative chauvinism and ecofascist imaginaries is the conceptual engine of this book. Quantitative chauvinism provides the epistemic infrastructure that ecofascist imaginaries exploit: without simplification, naturalization lacks its suppression of causal complexity; without expertise, hierarchization lacks its alibi of scientific authority; without inevitability, instrumentalization lacks its foreclosure of alternatives. But the relationship is conditional, not causal, and it runs in both directions. Quantitative chauvinism does not cause ecofascist imaginaries. It provides the infrastructure they recruit. Blocking quantitative chauvinism alone will not prevent ecofascist politics from finding other vehicles. Dismantling ecofascist imaginaries alone will not prevent quantitative chauvinism from attaching to other reactionary projects. The interaction thesis names a structural relationship, not a causal arrow, and the era chapters demonstrate both directions through cases.

A Mutually Constituting Relationship

The interaction between quantitative chauvinism and eco-fascist imaginaries is this book's core analytical thesis. Each framework identifies a genuine and analytically separable dimension of the political problem. Quantitative chauvinism explains how numbers acquire the authority to justify exclusion: through simplification, credentialing, and inevitability, numerical representations claim to have discovered constraints that foreclose political alternatives. Eco-fascist imaginaries explain what kind of exclusion is being justified and toward what future it is oriented: through naturalization, hierarchization, and instrumentalization, a vision of ecological futures converts coercive governance into stewardship. Neither triptych alone explains how reactionary population politics achieves institutional durability across a century of American demographic and environmental governance. Their conjunction does.

Quantitative chauvinism and eco-fascist imaginaries are distinct phenomena, and neither causes the other. Quantitative chauvinism operates across scientific disciplines, policy domains, and historical moments that have nothing to do with ecofascism: cost-benefit analyses that suppress distributional consequences, risk models that convert uncertainty into false precision, and audit regimes that substitute documentation for accountability all perform the operations this book names without serving exclusionary ecological politics. Eco-fascist imaginaries, for their part, predate and exceed the empirical instruments that lend them authority: blood-and-soil nationalism fused ecological belonging with racial purity long before demographic projections supplied it with charts and tables (Biehl and Staudenmaier, 1995). Each can operate without the other. But the two share an intrinsic compatibility that this book's cases exploit rather than invent. Quantitative chauvinism produces claims that appear to transcend the political contexts in which they were constructed; eco-fascist imaginaries require exactly that appearance of transcendence to present exclusionary governance as discovered necessity rather than chosen cruelty.

Understanding the coupling as mutually constituting rather than unidirectionally causal is essential for evaluating interventions. Blocking quantitative chauvinism in a specific instrument does not stop eco-fascist imaginaries from finding or funding another instrument. Conversely, delegitimizing a specific eco-fascist imaginary does not stop its supporting quantitative chauvinism from attaching itself to other reactionary projects: the epistemic operations of simplification, credentialing, and inevitability are available to any political formation that needs to present a preference as a constraint. The historical eras covered in this book are partly a history of exactly that substitution, as each successive delegitimation of one technical genre or institutional context produced a rapid migration to the next. The intervention point is therefore neither the instrument nor the imaginary in isolation, but the understanding of the values and strategies that bind them: the suppression of alternatives, the insulation from democratic scrutiny, and the foreclosure of contestable futures. The counter-frameworks developed in this book's conclusion do not abandon quantification but propose instruments whose assumptions are visible, whose uncertainty is legible, and whose categories remain open to democratic contestation, so that numerical authority serves solidarity and cooperation rather than exclusion and domination.

The Road Ahead

This book traces its argument across five eras spanning a century from 1968 to 2068. The first four eras are grounded in archival evidence, published primary sources, and the documented record. The fifth is speculative, tracing the trajectory of established patterns into plausible futures. A concluding chapter develops counter-frameworks, and a coda returns to Boulder.

Free Fall (1968–1994)

In the late 1960s, the Cold War's ambient dread found a new target. Paul Ehrlich, a Stanford entomologist, published a paperback that opened with a scene of a Delhi taxi ride and concluded that hundreds of millions of people would starve to death in the coming decade. The book sold three million copies. Ehrlich appeared on *The Tonight Show* more than twenty times. Zero Population Growth recruited hundreds of thousands of members. Garrett Hardin published "The Tragedy of the Commons" and later "Lifeboat Ethics," arguing that some must drown so that others might survive (?). In Boulder, Bartlett was giving his lecture. He was not the formation's most famous figure, but he was its most persistent. While Ehrlich burned bright on television and Hardin provoked with philosophical thought experiments, Bartlett repeated his arithmetic year after year, 1,742 times over four decades. His lecture worked at a different register. It did not predict famine or propose letting nations starve. It taught arithmetic, and it made the mathematics feel like insight and the insight feel like obligation (Robertson, 2012). Chapter 2 traces how this community converted exponential arithmetic into environmental common sense, how the eugenics-demography entanglement supplied the epistemic infrastructure that made certain claims thinkable and certain solutions administrable, and how a process this book calls *domesticated scientism* operated as the mechanism through which naturalization was performed pedagogically. The era's question: How did population anxiety become environmental common sense?

Quarantine (1994–2008)

In September 1994, delegates from 179 countries gathered in Cairo for the International Conference on Population and Development. The conference produced a Programme of Action that replaced coercive population control with a rights-based framework centered on women's reproductive autonomy. For the population concern community, Cairo was a catastrophe (Connelly, 2010). The institutional consensus that had sustained their work for three decades was shattered. Population anxiety did not disappear. It displaced. With fertility control delegitimized, immigration restriction became the residual lever. John Tanton, the ophthalmologist from northern Michigan who had chaired the Sierra Club's population committee, had already anticipated this displacement. Beginning in 1979, he built a network of organizations that would launder nativist conclusions through the aesthetics of neutral policy expertise (Normandin and Valles, 2015). The network produced fiscal impact statements that converted the political question "should we admit these people?" into the accounting question "what do these people cost?" It constructed a parallel credentialing infrastructure that could circulate restriction as research. Chapter 3 traces how the Tanton network survived Cairo, built its institutional architecture, captured and lost the contest for the Sierra

Club, and operated through the twin mechanisms of colorblind racism and what this book calls *agnotological infrastructuring*: the production of ignorance through parallel institutions and manufactured uncertainty. The era's question: How did these ideas survive their own delegitimation, and lose their association with racism in the process?

Swarm (2009–2024)

On August 14, 2008, the U.S. Census Bureau issued a press release announcing that non-Hispanic whites would become a minority of the American population by 2042. The projection was accompanied by a chart showing racial and ethnic composition lines converging and crossing. Within months, the crossover chart was circulating through restrictionist networks and nationalist forums, and within years it surfaced in the chan-board cultures that incubated the "great replacement" narrative (Bracke and Aguilar, 2023). The Census Bureau had not intended to produce replacement anxiety. Federal demographers were applying standard methods to standard data. But the decomposition technique provided something that no restrictionist think tank could have produced with comparable authority: a federal statistical agency confirming that the racial composition of America was changing. The data entered the world from a legitimate source and was picked up by actors with no institutional connection to its producers. Screenshots stripped the projection of its caveats. Memes stripped it of its conditionality. Manifestos cited it as an epistemic warrant for violence. Chapter 4 traces the path from Census data to manifesto citation, from federal press release to eliminationist politics. The era's question: How did demographic data become the raw material for white nationalist politics?

Portfolio (2025–2048)

Something strange happened as the replacement anxiety of the Swarm era crested: the demographic anxiety inverted. Birth rates across the developed world continued their long decline and headlines shifted from "minorities will be the majority" to "where have all the babies gone?" Pronatalist politics appeared as the mirror image of overpopulation anxieties and it recruited the same quantitative infrastructure. The fiscal burden analysis became the demographic return-on-investment calculation. The cost-per-immigrant became the cost-per-birth-prevented. A womb became a policy lever. In 2024, a legal complaint challenging the availability of mifepristone included arguments about the fiscal and political consequences of declining birth rates. The complaint reated reproduction as a variable to be optimized, each prevented birth carrying an implied economic and political cost, each additional birth carrying an implied fiscal return. The same logic that governed portfolio management in finance was being applied to human reproduction. Chapter 5 develops two concepts: *fine-tuning*, the application of financial optimization to demographic governance, and *temporal gerrymandering*, the manipulation of demographic time horizons to manufacture urgency. The chapter's deepest

claim: zero population growth and pronatalism are structurally the same project. The era's question: Why is pronatalism the same project as restriction?

Evacuation (2049–2068) and Beyond

The final era is speculative, and it is marked as such throughout. It traces the documented mechanisms into a future defined by cascading climate catastrophe and the politics of managed retreat. When the question shifts from "who gets in?" to "who gets rescued?," the instruments converge into a fifth: the catastrophe analytics of selective rescue. Garrett Hardin's lifeboat metaphor, repudiated in 1974, returns not as political philosophy but as emergency management. Chapter 7 turns from trajectory to refusal, developing counter-methods for each instrument and counter-imaginaries from ecofeminist, ecosocialist, and environmental justice traditions. Chapter 8 returns to Boulder and asks what quantitative egalitarianism would look like in the city where the arithmetic of concern was first taught.

Speculation and Counter-Frameworks

The book's conclustion extends beyond the four documented eras into a speculative fifth era, the *Evacuation* (2049–2068), in which climate catastrophe intensifies the mechanisms the book has traced. In this speculative register, shock modeling and catastrophe analytics replace continuous trend forecasting as the dominant quantitative instruments. Triage algorithms assign survival probabilities by demographic category. Climate migration scoring systems determine eligibility for resettlement. The lifeboat metaphor replaces the portfolio as the governing imaginary: selective rescue as instrumentalization completed, the abandonment of vulnerable populations framed as tragic necessity.

The speculative extension makes a methodological claim, not a predictive one. It argues that the mechanisms documented in the four historical eras are durable and generative enough that their trajectory can be projected with analytical precision, even if the specific forms they take in the future remain uncertain. The scholarly warrant for this move comes from two traditions. Donna Haraway's speculative fabulation uses narrative projection to make visible the political stakes of present arrangements, treating the future not as a prediction but as a diagnostic surface on which current mechanisms can be examined at their fullest extension ?. Avery Gordon's concept of ghostly matters treats the spectral presence of past violence as a method for apprehending structures of power that resist direct empirical observation ?. Both traditions insist that rigor and imagination are not opposed but complementary: the speculative register is disciplined by the same evidentiary standards that govern the historical chapters, even as it extends those standards into terrain where archival evidence does not yet exist.

The conclusion also develops counter-frameworks for each of the book's four instruments and three imaginaries. These counter-frameworks are not utopian proposals. They are demonstrations that the same quantitative techniques, applied with different assumptions, different objective functions, and different accountability structures, can widen rather than narrow the circle of democratic deliberation. Scenario planning that preserves optionality rather than manufacturing destiny. Disaggregation that surfaces inequality rather than constructing burden. Projection that foregrounds uncertainty rather than producing countdown. Optimization that maximizes collective welfare rather than engineering demographic composition. Each counter-method is developed through specific cases and candidate models drawn from existing practice: the IPCC scenario architecture, environmental justice screening tools, participatory budgeting, the CARE principles for Indigenous data sovereignty **?**.

The book's interdisciplinary architecture reflects its subject. Quantitative chauvinism operates across the boundaries that organize academic knowledge production: it is simultaneously a problem in science and technology studies (how do numerical instruments acquire authority?), in critical demography (how do demographic categories encode hierarchy?), in the sociology of knowledge (how does audit culture insulate claims from scrutiny?), in the sociology of extremism (how do far-right movements recruit scientific credibility?), in environmental sociology (how does ecological concern become nativist politics?), and in critical data studies (how do data infrastructures reproduce inequality?). The book addresses each of these conversations explicitly, and its analytical vocabulary is designed to travel across them. Quantitative chauvinism extends Porter's concept of mechanical objectivity as a technology of trust by specifying three orientations through which that technology operates in demographic governance (**?**). Ecofascist imaginaries extend Griffin's concept of palingenetic ultranationalism by specifying how ecological crisis provides the rebirth myth and quantitative instruments provide the epistemic infrastructure (**?**). The diagnostic matrix is the book's contribution to the intersection: a vocabulary for tracing the specific mechanisms by which quantitative authority becomes the condition of possibility for exclusionary politics.

The scholarly communities this book addresses — critical data studies, critical demography, STS, environmental sociology, and extremism studies — have each produced accounts of the phenomena this book examines. What has been missing is an account that traces the specific mechanisms by which these operations interact: how the population knowledge acquires the institutional invisibility to produce conditions under which ecofascist politics becomes credible.

Infrastructures of Safety

Boulder is not safe. The community that built infrastructure for environmental safety, the growth boundary, the open space program, the climate action plan, the permit allocation system, also built infrastructure through which demographic exclusion operates. The growth boundary that protects the greenbelt also inflates land values beyond the reach of working-class families and immigrants: Boulder's median home price exceeded $1.2 million in 2024, a filter more effective than any explicit immigration restriction. The open space program that preserves mountain parkland also functions as a cordon that limits the city's physical expansion, concentrating socio-economic homogeneity within a fixed perimeter. The labyrinthine system of permitting developments encodes assumptions about who belongs inside the boundary and at what rate the community's composition should be permitted to change.

None of these instruments were explicitly designed as tools of demographic exclusion but all of them function to filter out classes of people who lack the historical roots, entrepreneurial connections, and financial resources that reproduce historic systems of marginalization. Were these filters encoded as legislative language barring new residents on the basis of their tenure in the community, success of their businesses, or their outright wealth, it would be trivial to connect intent and impact. But the quantitative form in which they are administered makes this linkage difficult to see because the numeric thresholds were chosen to describe ostensible ecological constraints rather than political preferences. This is the specific sense in which Boulder is not safe: the community's environmental governance, administered through the quantitative instruments the book traces, produces demographic outcomes that its quantitative form renders invisible as political choices. A doubling-time calculation, the planner's growth cap, the budget analyst's fiscal impact assessment, and the climate plan's emissions target each present a governance decision as a technical finding, and the accumulation of these technical findings produces a community that is overwhelmingly white, overwhelmingly affluent, and overwhelmingly insulated from the demographic changes reshaping the nation around it.

The phrase "infrastructures of safety" has been doing double work throughout this introduction, and it will continue to do so throughout the book. In one register, it names what Boulder built: governance systems designed to protect the community's environmental quality of life. In another register, it names what the book diagnoses: systems that protect a specific demographic composition by embedding exclusionary assumptions in quantitative instruments that appear to be politically neutral. The book's central analytical vocabulary of quantitative chauvinism and ecofascist imaginaries define the mechanisms by which the first register slides into the second. The doubling-time calculation that warns of ecological limits also forecloses structural alternatives to demographic restriction. The impact statement that quantifies the fiscal cost of immi-

gration also launders a racial hierarchy through administrative aesthetics. The population projection that decomposes the future by race also manufactures a countdown that rewards eliminationist politics. The fertility model that optimizes the dependency ratio also treats women's reproductive capacity as a portfolio to be optimized. In each case, the quantitative instrument's form, its apparent objectivity, its institutional credentials, its capacity to convert political claims into technical findings, is what enables the slide.

The professional stakes of this analysis are immediate and personal. Computational social scientists, demographers, and data analysts work with the instruments this book examines. They produce the projections, the cross-tabulations, the decompositions, and the optimization models that the book argues can serve exclusionary projects. The argument is not that these professionals are complicit in ecofascist politics, but rather that the instruments they produce are portable: they can travel from the institutions that produce them to the political formations that wield them, and the instruments' quantitative form makes that travel invisible as a political process. The professional predicament this book names is the predicament of anyone whose work involves producing demographic data in a political environment where that data is available for recruitment into exclusionary projects. Public data infrastructure is simultaneously disappearing (as data access becomes restricted and defunded) and weaponizing (as the data that remains circulates through political infrastructure its producers do not control). The need for critical literacy about quantitative claims becomes more urgent as the claims proliferate, and the book's counter-frameworks are designed to serve that need: not to abandon quantification but to show how it can be practiced in ways that widen rather than narrow the circle of democratic concern.

The book traces this slide not to demonstrate that quantification is inherently exclusionary, which is both false and analytically useless, but to show how quantitative instruments, wielded by specific actors through specific institutional channels, have been recruited to serve projects of demographic exclusion that their form disguises as ecological necessity. Quantitative tools can widen democratic deliberation as readily as they can narrow it. Environmental justice screening tools use the same cross-tabulation technique that immigration impact statements deploy, but they disaggregate to reveal who bears environmental costs rather than to assign fiscal burden by nativity. The question is not whether to quantify but how: with what assumptions, for what objectives, accountable to whom, and with what mechanisms for contesting the categories.

The conclusion returns to Boulder and asks what the book's analysis means for a specific community. What would it mean for Boulder to subject its growth boundary to the counter-methods the book develops? What would it mean for the University of Colorado to acknowledge the entanglement of Bartlett's environmental pedagogy with reactionary politics, not to condemn a beloved figure but to use the university's own history as a case for the kind of quantitative practice the book proposes? What would

it look like for the planning documents to make its demographic assumptions visible and contestable, rather than embedding them in growth-cap metrics that appear to describe ecological constraints? What would infrastructure for demographic solidarity look like in a community that has built its identity on environmental virtue through quantitative governance?

The book's answer is not a blueprint but a set of commitments. Make the objective function explicit: what is the metric optimizing for, and who decided? Make the assumptions visible: what feedback loops, transitions, and structural causes has the instrument suppressed, and what would the analysis look like if they were restored? Make the uncertainty legible: what range of outcomes does the projection encompass, and what would the policy conversation look like if the range were presented rather than a single trajectory? Make the categories contestable: who defined the demographic types the instrument produces, and what alternative categorizations would the data support? Make the governance accountable: who bears the costs of the instrument's findings, and what mechanisms exist for the affected populations to contest them? These five commitments compose what the book calls *quantitative egalitarianism*: the practice of building quantitative instruments that widen rather than narrow the circle of democratic deliberation. Quantitative egalitarianism does not reject numbers. It holds them accountable to the populations they govern.

In 1969, a physicist walked to a lectern in a university classroom in this city at the foot of these mountains. He drew a curve on the chalkboard and told the story of bacteria in a bottle. He asked his audience to consider what happens when a population doubles in a finite space, and he asked them to consider it as the most important concept they would ever encounter. He believed he was teaching a lesson about mathematics and survival. He was. But he was also building infrastructure, an arithmetic of concern that would outlive him, that would travel further than he intended, and that would serve political projects he may never have imagined. This book traces what happened when that lesson left the classroom.